

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A mutant N-acetylglutamate synthase wherein ~~the amino acid sequence corresponding to positions from 15 to 19 in a wild-type N-acetylglutamate synthase is replaced with any one of amino acid sequences of SEQ ID NOS: 1 to 4, and feedback inhibition by L-arginine is desensitized,~~

wherein the ~~wild-type~~ N-acetylglutamate synthase is a protein defined in the following (A) or (B):

(A) a protein having an amino acid sequence defined in SEQ ID NO: 16; or

(B) a protein that is encoded by a DNA which hybridizes with a DNA having the nucleotide sequence defined in SEQ ID NO: 15 under stringent conditions, wherein said stringent conditions entail a temperature ranging from 60°C to 65°C, a salt concentration ranging from 0.1 x SSC to 1 x SSC, and 0.1% SDS, and wherein said protein is at least 70% homologous to a protein having amino acid sequence defined in SEQ ID NO: 16 and wherein said protein has a N-acetylglutamate synthase activity.

2. (Currently Amended) The mutant N-acetylglutamate synthase according to claim 1, where the ~~wild-type~~ N-acetylglutamate synthase is that of *Escherichia coli*.

3. (Canceled)

4. (Withdrawn; Currently Amended) A DNA coding for the mutant N-acetylglutamate synthase as defined in ~~any one of claims 1 to 3~~ claim 1.

5. (Withdrawn) A bacterium belonging to the genus *Escherichia* which is transformed with the DNA as defined in claim 4 and has an activity to produce L-arginine.

6. (Withdrawn) A method for producing L-arginine comprising the steps of cultivating the bacterium as defined in claim 5 in a medium to produce and accumulate L-arginine in the medium and collecting L-arginine from the medium.

7. (New) The mutant N-acetylglutamate synthase as defined in claim 1, wherein the N-acetylglutamate synthase has an amino acid sequence defined in SEQ ID NO: 16.

8. (New) The mutant N-acetylglutamate synthase as defined in claim 7, wherein positions 15 to 19 are replaced with the amino acid sequences of SEQ ID NO: 1.

9. (New) The mutant N-acetylglutamate synthase as defined in claim 7, wherein positions 15 to 19 are replaced with the amino acid sequences of SEQ ID NO: 2.

10. (New) The mutant N-acetylglutamate synthase as defined in claim 7, wherein positions 15 to 19 are replaced with the amino acid sequences of SEQ ID NO: 3.

11. (New) The mutant N-acetylglutamate synthase as defined in claim 7, wherein positions 15 to 19 are replaced with the amino acid sequences of SEQ ID NO: 4.

12. (New) The mutant N-acetylglutamate synthase as defined in claim 1, wherein the N-acetylglutamate synthase is a protein that is encoded by a DNA which hybridizes with a DNA having the nucleotide sequence defined in SEQ ID NO: 15 under stringent conditions, wherein said stringent conditions entail a temperature ranging from 60°C to 65°C, a salt concentration ranging from 0.1 x SSC to 1 x SSC, and 0.1% SDS, and wherein said protein has a N-acetylglutamate synthase activity.

13. (New) The mutant N-acetylglutamate synthase as defined in claim 12, wherein positions 15 to 19 are replaced with the amino acid sequences of SEQ ID NO: 1.

14. (New) The mutant N-acetylglutamate synthase as defined in claim 12, wherein positions 15 to 19 are replaced with the amino acid sequences of SEQ ID NO: 2.

15. (New) The mutant N-acetylglutamate synthase as defined in claim 12, wherein positions 15 to 19 are replaced with the amino acid sequences of SEQ ID NO: 3.

16. (New) The mutant N-acetylglutamate synthase as defined in claim 12, wherein positions 15 to 19 are replaced with the amino acid sequences of SEQ ID NO: 4.

SUPPORT FOR THE AMENDMENT

Claim 3 has been canceled.

Claims 1, 2, and 4 have been amended.

Claims 7-16 have been added.

The amendment of Claims 1, 2, and 4 is supported by Claims 1-4 as originally filed and the specification, including the Examples, as originally filed. For example, support for the present amendment may be found on page 9, line 12 to page 10, line 7 and at page 7, lines 17-21. New Claims 7-16 are also supported by the original specification at pages 7-20 and the originally presented claims.

New Claims 7-16 are within the scope of the elected invention and should be examined along with Claims 1-3.

No new matter is believed to be added by these amendments.